

# Paper Industry Machinery Manufacturing: 2002

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## 2002 Economic Census

*Manufacturing*

Industry Series



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U.S. Department of Commerce  
Economics and Statistics Administration  
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-- Not applicable for this report.

**Table 1. Historical Statistics for the Industry: 2002 and Earlier Years**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)					
333291, Paper industry machinery manufacturing .....	2002..	268	290	10 780	537 476	5 497	10 834	215 055	1 032 434	938 717	1 990 245	136 444
	2001..	N	N	14 735	672 875	7 819	16 026	288 558	1 168 005	1 405 895	2 640 210	70 723
	2000..	N	N	15 806	730 890	8 857	18 370	328 605	1 345 992	1 451 342	2 765 899	79 151
	1999..	N	N	16 400	739 920	9 044	18 120	331 724	1 369 932	1 549 704	2 941 101	79 048
	1998..	N	N	18 539	771 823	10 128	20 466	364 179	1 490 265	1 711 770	3 185 119	80 239
	1997..	330	363	18 313	761 458	10 127	20 723	365 303	1 622 283	1 817 466	3 386 920	92 590

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
<b>333291, Paper industry machinery manufacturing</b>												
United States .....	1	290	106	10 780	537 476	5 497	10 834	215 055	1 032 434	938 717	1 990 245	136 444
California .....	1	12	4	197	10 371	90	161	3 406	20 612	13 523	33 890	2 823
Florida .....	2	10	3	138	6 219	43	87	1 493	13 394	6 784	20 581	235
Georgia .....	4	8	3	142	7 220	68	133	2 273	15 839	11 609	27 851	284
Louisiana .....	—	5	4	194	9 529	116	241	5 511	26 355	27 204	54 619	373
Maine .....	—	4	2	173	8 349	77	167	2 651	18 694	24 028	42 635	292
Massachusetts .....	3	18	6	750	39 274	396	705	15 328	70 253	51 388	126 212	1 982
Michigan .....	1	7	2	213	11 016	88	186	3 550	20 542	13 634	34 057	434
Missouri .....	—	4	2	156	5 757	117	175	3 615	12 289	4 195	16 601	215
New Jersey .....	—	15	3	501	28 896	146	272	4 834	62 946	122 833	184 969	2 986
New York .....	3	20	4	392	18 558	239	433	7 751	40 633	17 632	58 129	839
Ohio .....	1	16	6	483	23 213	260	521	10 054	38 532	57 069	96 649	2 089
Pennsylvania .....	—	16	7	949	44 595	523	1 103	19 297	74 874	47 575	131 919	2 874
Wisconsin .....	—	47	28	3 967	208 124	1 865	3 721	82 412	378 344	380 623	758 906	14 468

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

# Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>333291, Paper industry machinery manufacturing</b>	
Companies <sup>1</sup> .....	number.. 268
All establishments <sup>2</sup> .....	number.. 290
Establishments with 1 to 19 employees .....	number.. 184
Establishments with 20 to 99 employees .....	number.. 78
Establishments with 100 employees or more .....	number.. 28
All employees <sup>3</sup> .....	number.. 10 780
Total compensation .....	\$1,000.. 676 775
Annual payroll .....	\$1,000.. 537 476
Total fringe benefits .....	\$1,000.. 139 299
Production workers, average for year .....	number.. 5 497
Production workers on March 12 .....	number.. 5 671
Production workers on May 12 .....	number.. 5 535
Production workers on August 12 .....	number.. 5 362
Production workers on November 12 .....	number.. 5 418
Production worker hours .....	1,000.. 10 834
Production worker wages .....	\$1,000.. 215 055
Total cost of materials .....	\$1,000.. 938 717
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 783 890
Resales .....	\$1,000.. 113 034
Purchased fuels .....	\$1,000.. 3 118
Purchased electricity .....	\$1,000.. 11 190
Contract work .....	\$1,000.. 27 485
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 169 131
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. -
Total value of shipments .....	\$1,000.. 1 990 245
Primary products value of shipments .....	\$1,000.. 1 590 967
Secondary products value of shipments .....	\$1,000.. 146 387
Total miscellaneous receipts .....	\$1,000.. 252 891
Value of resales .....	\$1,000.. 145 052
Contract receipts .....	\$1,000.. 20 443
Other miscellaneous receipts .....	\$1,000.. 87 396
Primary products specialization ratio .....	percent.. 92
Value of primary products shipments made in all industries .....	\$1,000.. 1 649 196
Value of primary products shipments made in this industry .....	\$1,000.. 1 590 967
Value of primary products shipments made in other industries .....	\$1,000.. 58 229
Coverage ratio .....	percent.. 96
Value added .....	\$1,000.. 1 032 434
Total inventories, beginning of year .....	\$1,000.. 428 578
Finished goods inventories .....	\$1,000.. 161 990
Work-in-process inventories .....	\$1,000.. 163 566
Materials and supplies inventories .....	\$1,000.. 103 022
Total inventories, end of year .....	\$1,000.. 417 258
Finished goods inventories .....	\$1,000.. 143 972
Work-in-process inventories .....	\$1,000.. 162 490
Materials and supplies inventories .....	\$1,000.. 110 796
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. '831 506
Total capital expenditures (new and used) .....	\$1,000.. '36 444
Buildings and other structures (new and used) .....	\$1,000.. '4 056
Machinery and equipment (new and used) .....	\$1,000.. '32 388
Automobiles, trucks, etc., for highway use .....	\$1,000.. '1 753
Computers and peripheral data processing equipment .....	\$1,000.. '5 654
All other expenditures for machinery and equipment .....	\$1,000.. '24 981
Total retirements .....	\$1,000.. '51 259
Gross value of depreciable assets at end of year .....	\$1,000.. '816 691
Depreciation charges during year .....	\$1,000.. '43 687
Total rental payments .....	\$1,000.. 33 357
Buildings and other structures .....	\$1,000.. 15 837
Machinery and equipment .....	\$1,000.. 17 520
Total other expenses <sup>4</sup> .....	\$1,000.. 183 154
Response coverage ratio <sup>5</sup> .....	percent.. 81
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 10 237
Communications services <sup>4</sup> .....	\$1,000.. 7 070
Legal services <sup>4</sup> .....	\$1,000.. 10 233
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 4 860
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 8 850
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 3 061
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 1 591
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 2 645
Taxes and license fees <sup>4</sup> .....	\$1,000.. 4 814
All other expenses <sup>4</sup> .....	\$1,000.. 129 792

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All establishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
333291, Paper industry machinery manufacturing											
All establishments .....	1	290	10 780	537 476	5 497	10 834	215 055	1 032 434	938 717	1 990 245	'36 444
Establishments with—											
1 to 4 employees .....	9	83	182	7 981	105	183	3 342	19 085	12 149	31 252	'576
5 to 9 employees .....	7	53	371	18 415	202	399	7 560	46 317	28 684	75 496	'1 328
10 to 19 employees .....	5	48	708	32 832	443	877	15 751	75 272	44 702	118 720	'3 092
20 to 49 employees .....	1	55	1 770	77 827	995	1 963	36 105	140 317	119 700	267 709	'6 339
50 to 99 employees .....	—	23	1 630	78 770	940	1 835	34 955	159 508	113 407	270 935	'5 225
100 to 249 employees .....	2	22	3 433	176 728	1 799	3 357	69 579	340 457	316 031	665 561	'7 410
250 to 499 employees .....	—	5	g	D	D	D	D	D	D	D	D
500 to 999 employees .....	—	1	f	D	D	D	D	D	D	D	D
1,000 to 2,499 employees .....	—	—	—	—	—	—	—	—	—	—	—
2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>4</sup> .....	9	113	458	21 878	268	505	9 135	51 279	31 705	82 982	'1 400

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
333291	Paper industry machinery manufacturing .....	290	10 780	537 476	5 497	10 834	215 055	1 032 434	938 717	1 990 245	'36 444
3332911	Paper industry machinery .....	84	6 535	334 698	3 086	6 069	123 061	626 681	698 541	1 333 449	'21 166
3332913	Parts and attachments for paper industry machinery (sold separately) .....	49	2 985	144 646	1 646	3 319	65 793	274 918	166 402	452 339	'10 483

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. **Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333291	Paper industry machinery manufacturing .....	2002.. N 1997.. N	X X	X X	1 649 196 2 986 768
3332911	Paper industry machinery .....	2002.. N 1997.. N	X X	X X	939 808 1 956 175
33329111	Paper industry wood preparations equipment and other paper industry pulp mill machinery (including pulp mill digesters and deckers, etc.) .....	2002.. N 1997.. N	X X	X X	246 774 262 477
3332911104	Paper industry wood preparations equipment (including debarkers, chipper, knotters, splitters, chipscreens, water-jet bark strippers, etc.) .....	2002.. 5 1997.. N	X X	X X	21 980 N
3332911111	Paper industry pulp mill grinders and refiners (TMP) for the manufacture of mechanical pulp .....	2002.. 5 1997.. 4	X X	X X	27 724 59 071
3332911121	Paper industry pulp mill deckers, thickeners, wet lap machines, bleaching equipment, pulp screens, washers, and save-alls .....	2002.. 5 1997.. 6	X X	X X	D D
3332911123	Other paper industry pulp mill machinery .....	2002.. 7 1997.. N	X X	X X	D N
3332911131	Paper mill stock preparation equipment, including refiners (chip, conical, deflaker, disk, etc.), pulpers, beaters, jordsans, etc. ....	2002.. 4 1997.. 6	X X	X X	75 289 D
333291112	Paper mill paper making machines .....	2002.. N 1997.. N	X X	X X	100 060 256 707
3332911236	Paper mill paper making machines, dryers for paper pulp, paper, or paperboard .....	2002.. 5 1997.. 9	X X	X X	44 134 57 516
3332911241	Other paper mill paper making machines, including headbox forming area, presses, and reels .....	2002.. 10 1997.. 10	X X	X X	55 926 199 191
333291113	Paper mill coating machines, calendering and rolling machines, and other paper machines .....	2002.. N 1997.. N	X X	X X	66 592 315 077
3332911346	Paper mill paper coating machines, including equipment for applying sizing and pigment coating to paper .....	2002.. 5 1997.. 11	X X	X X	3 467 62 722
3332911351	Paper mill paper calendering and similar rolling machines for finishing paper .....	2002.. 6 1997.. 6	X X	X X	12 232 100 196
3332911361	Other paper mill paper machines .....	2002.. 8 1997.. 17	X X	X X	50 893 152 159
333291114	Paper mill machines for finishing paper, except calendering or similar rolling .....	2002.. N 1997.. N	X X	X X	64 457 141 139
3332911456	Paper mill machines for finishing paper, except calendering or similar rolling .....	2002.. 9 1997.. 17	X X	X X	64 457 141 139
333291115	Machines for making bags, boxes, molding articles in paper pulp, paper, and paperboard and paper and paperboard cutting machines, etc. ....	2002.. N 1997.. N	X X	X X	395 227 938 527
3332911566	Paper and paperboard cutting machines (except sheeters and winders) .....	2002.. 7 1997.. 14	X X	X X	11 969 D
3332911571	Machines for making paper and paperboard bags, sacks, and envelopes .....	2002.. 4 1997.. 5	X X	X X	19 382 43 477
3332911576	Paper and paperboard corrugated box making machines .....	2002.. 17 1997.. 20	X X	X X	138 671 422 100
3332911581	Machines for making paper and paperboard cartons, boxes, cases, tubes, drums, and similar containers, except by molding (excluding corrugated box making machines) .....	2002.. 8 1997.. 15	X X	X X	69 256 170 448
3332911591	Other paper and paperboard converting equipment for finishing paper or paperboard .....	2002.. 7 1997.. 11	X X	X X	17 867 D
3332911597	Other paper and paperboard converting equipment for converting paper and paperboard .....	2002.. 13 1997.. N	X X	X X	138 082 N
3332911Y	Paper industry machinery, nsk .....	2002.. N 1997.. N	X X	X X	66 698 42 248
3332911YVV	Paper industry machinery, nsk .....	2002.. N 1997.. N	X X	X X	66 698 42 248
3332913	Parts and attachments for paper industry machinery (sold separately) .....	2002.. N 1997.. N	X X	X X	538 554 814 234
33329131	Parts and attachments for paper industry wood preparation equipment (sold separately) .....	2002.. N 1997.. N	X X	X X	13 402 D
3332913101	Parts and attachments for paper industry wood preparation equipment (sold separately) .....	2002.. 3 1997.. 4	X X	X X	13 402 D
33329132	Parts and attachments for paper industry pulp mill machinery (sold separately) .....	2002.. N 1997.. N	X X	X X	51 068 D
3332913211	Parts and attachments for paper industry pulp mill machinery (sold separately) .....	2002.. 12 1997.. 20	X X	X X	51 068 D
33329133	Parts and attachments for paper industry machines for finishing paper (sold separately) .....	2002.. N 1997.. N	X X	X X	199 601 97 047
3332913321	Parts and attachments for paper industry machines for finishing paper (sold separately) .....	2002.. 16 1997.. 14	X X	X X	199 601 97 047

See footnotes at end of table.



Table 6a. **Products Statistics: 2002 and 1997—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333291	Paper industry machinery manufacturing—Con.				
3332913	Parts and attachments for paper industry machinery (sold separately)—Con.				
33329134	Parts and attachments for paper mill machinery, except machines for finishing paper (sold separately) . . . . .	2002.. N	X	X	77 998
		1997.. N	X	X	351 262
3332913431	Parts and attachments for paper mill machinery, except machines for finishing paper (sold separately) . . . . .	2002.. 11	X	X	77 998
		1997.. 26	X	X	351 262
33329135	Parts and attachments for paper and paperboard converting equipment (sold separately) . . . . .	2002.. N	X	X	150 059
		1997.. N	X	X	263 222
3332913541	Parts and attachments for paper and paperboard converting equipment (sold separately) . . . . .	2002.. 39	X	X	150 059
		1997.. 40	X	X	263 222
3332913Y	Parts and attachments for paper industry machinery (sold separately), nsk . . . . .	2002.. N	X	X	46 426
		1997.. N	X	X	17 444
3332913YVV	Parts and attachments for paper industry machinery (sold separately), nsk . . . . .	2002.. N	X	X	46 426
		1997.. N	X	X	17 444
333291W	Paper industry machinery manufacturing, nsk, total . . . . .	2002.. N	X	X	170 834
		1997.. N	X	X	216 359
333291WY	Paper industry machinery manufacturing, nsk, total . . . . .	2002.. N	X	X	170 834
		1997.. N	X	X	216 359
333291WYWW	Paper industry machinery manufacturing, nsk, for nonadministrative-record establishments . . . . .	2002.. N	X	X	95 762
		1997.. N	X	X	112 837
333291WYWY	Paper industry machinery manufacturing, nsk, for administrative-record establishments . . . . .	2002.. N	X	X	75 072
		1997.. N	X	X	103 522

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p—10 to 19 percent estimated; q—20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3332911	Paper industry machinery	
	United States..... 2002..	939 808
	..... 1997..	1 956 175
	California ..... 2002..	15 566
	..... 1997..	10 360
	Florida ..... 2002..	14 886
	..... 1997..	29 563
	Georgia ..... 2002..	9 091
	..... 1997..	24 732
	Massachusetts ..... 2002..	69 145
	..... 1997..	78 286
	Michigan..... 2002..	6 909
	..... 1997..	15 578
	New York ..... 2002..	35 690
	..... 1997..	55 261
3332913	Ohio ..... 2002..	47 803
	..... 1997..	75 880
	Pennsylvania..... 2002..	36 253
	..... 1997..	94 260
	Wisconsin ..... 2002..	336 749
	..... 1997..	805 563
	Parts and attachments for paper industry machinery (sold separately)	
	United States..... 2002..	538 554
	..... 1997..	814 234
	Georgia ..... 2002..	14 725
	..... 1997..	7 607
	Louisiana ..... 2002..	24 443
	..... 1997..	2 662
	New York ..... 2002..	13 115
	..... 1997..	56 557
	Ohio ..... 2002..	22 257
	..... 1997..	46 846
	Pennsylvania..... 2002..	60 609
	..... 1997..	33 217
	Wisconsin ..... 2002..	191 443
	..... 1997..	290 037

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
333291	Paper industry machinery manufacturing		
00900001	Total materials .....2002..	X	783 890
	.....1997..	X	1 472 409
001900B1	Electrical transmission, distribution, and control equipment.....2002..	X	19 428
	.....1997..	X	92 181
33399601	Fluid power pumps, motors, and hydrostatic transmissions (hydraulic and pneumatic) .....2002..	X	3 539
	.....1997..	X	10 466
33391103	All other pumps .....2002..	X	845
	.....1997..	X	325
33291207	Fluid power valves (hydraulic and pneumatic) .....2002..	X	D
	.....1997..	X	20 698
33399501	Fluid power cylinders and rotary actuators (hydraulic and pneumatic) .....2002..	X	D
	.....1997..	X	17 248
33291203	Fluid power hose and tube fittings and assemblies (hydraulic and pneumatic) .....2002..	X	949
	.....1997..	X	19 437
33399901	Fluid power filters (hydraulic and pneumatic) .....2002..	X	377
	.....1997..	X	2 251
00190089	Other fluid power products, hydraulic and pneumatic .....2002..	X	1 695
	.....1997..	X	7 098
33200057	Fabricated metal products (excluding forgings) .....2002..	X	36 078
	.....1997..	X	73 655
33210000	Forgings .....2002..	S	3 032
	.....1997..	N	
33151001	Iron and steel castings (rough and semifinished) .....2002..	X	46 999
	.....1997..	X	73 337
33152011	Nonferrous (aluminum, copper, etc.) castings (rough and semifinished) .....2002..	X	2 313
	.....1997..	X	13 697
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products) .....2002..	X	29 630
	.....1997..	X	144 131
33120016	Steel sheet and strip (including tinplate) .....2002..	S	8 108
	.....1997..	N	
33120033	All other steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	3 818
	.....1997..	X	27 396
331000AJ	Nonferrous metal shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	1 995
	.....1997..	X	9 795
33531221	Integral horsepower electric motors and generators (1 hp or more) .....2002..	X	13 470
	.....1997..	X	27 880
33299105	Ball bearings (mounted or unmounted) .....2002..	X	4 506
	.....1997..	X	16 840
33299103	Roller bearings (mounted or unmounted) .....2002..	X	3 456
	.....1997..	X	22 496
33361301	Plain bearings and bushings .....2002..	X	4 101
	.....1997..	X	14 601
33361200	Mechanical speed changers, gears, and industrial high-speed drives .....2002..	X	11 628
	.....1997..	X	60 366
32600017	Fabricated rubber products (excluding tires, tubes, hose, belting, and gaskets) .....2002..	X	8 628
	.....1997..	X	14 043
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	203 546
	.....1997..	X	670 471
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	358 533
	.....1997..	X	133 997

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.